

ABSTRACT

Provided are highly productive mutant α -amylases which are derived from an α -amylase having an amino acid sequence represented by SEQ ID No. 1 or 2 or showing at least 60%
5 homology thereto and are constructed so that a specific amino acid residue taking part in productivity is deleted or substituted with another amino acid residue, a gene encoding the mutant α -amylase, vector, transformant cell, a method for producing the mutant α -amylase, which comprises
10 cultivating the transformant cell, and a detergent composition containing the mutant α -amylase.

According to the present invention, α -amylases can be produced at a high yield from a recombinant microorganism, making it possible to drastically reduce a cost of their
15 industrial production. This leads to production increase of liquefying alkaline α -amylases having heat resistance, chelating agent resistance and oxidant resistance and being useful as enzymes for a detergent.